

IN THE CLAIMS:

Please replace claims 1, 2, 6, 10, 11, 13-16 and 23 as follows:

b32 1. (Amended) A photomask blank comprising at least a thin film having a shading function formed over a transparent substrate,
wherein the thin film contains a metal material, and contains helium to such an extent that the film stress of the thin film can be reduced to be a desired film stress.

2. (Amended) A photomask blank comprising a thin film having at least a shading function formed over a transparent substrate,
wherein the thin film contains a metal material and the thin film is formed by sputtering in which a sputtering target is disposed in a vacuum chamber into which an atmosphere gas has been introduced, and
the thin film is formed at a deposition rate of 0.5 nm/sec to 6 nm/sec, and the helium gas content is 30 to 90 vol% in the atmosphere gas.

b33 4. (Amended) The photomask blank according to Claim 3, wherein the thin film is a laminated film including a shading function that contains carbon, and an anti-reflective film that contains oxygen.

b34 Sub E 6. (Twice Amended) The photomask blank according to Claim 4, wherein the carbon content is 0 to 25 atomic% and the oxygen content is 0 to 75 atomic%.

b35 Sub E 10. (Twice Amended) The photomask blank according to Claim 9, wherein the thin film has an oxygen content that continuously decreases and a carbon content that continuously increases from the thin film surface side to the transparent side, nitrogen is contained in the nitride film in a relatively greater amount than the amount of nitrogen contained in the thin film, and the amount of the metal decreases as the amount of nitrogen in the nitride film increases.

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11. (Twice Amended) The photomask blank according to Claim 1, wherein the thin film consists essentially of chromium.

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13. (Twice Amended) A photomask blank in which a mask pattern has been formed by the patterning of the thin film formed on the transparent substrate of the photomask blank according to the invention in Claim 1.

14. (Amended) A method of manufacturing a photomask blank, in which a sputtering target is disposed in a vacuum chamber into which an atmosphere gas has been introduced, and at least a thin film having a shading function formed over a transparent substrate by sputtering,

wherein the thin film contains a metal material,

the correlation between the amount of helium gas contained in the atmosphere gas and the film stress of the thin film is determined ahead of time, and

the helium gas content is determined from said correlation so that the thin film will have a film stress such that the mask pattern obtained when the thin film is patterned will have the desired pattern position precision, and the thin film is formed by sputtering in an atmosphere gas having this helium gas content.

15. (Amended) A method of manufacturing a photomask blank, in which a sputtering target is disposed in a vacuum chamber into which an atmosphere gas has been introduced, and at least a thin film having a shading function formed over a transparent substrate by sputtering,

wherein the thin film contains a metal material,

the thin film is formed at a deposition rate of 0.5 nm/sec to 6 nm/sec, and

the atmosphere gas contains helium gas.

16. (Amended) A method of manufacturing a photomask blank, in which a sputtering target is disposed in a vacuum chamber into which an atmosphere gas has been

introduced, and at least a thin film having a shading function formed over a transparent substrate by sputtering,

wherein the thin film contains a metal material,

the thin film is formed at a sputtering power of 950 to 3000 W, and

the atmosphere gas contains helium gas.

23. (Twice Amended) The method of manufacturing a photomask blank according to Claim 14, wherein the thin film consists essentially of chromium.

Please add new claims 27-30 as follows:

--27. The photomask blank according to Claim 1, wherein the metal material is a material which causes a tensile stress change in the thin film--

--28. The photomask blank according to Claim 1, wherein the desired film stress is a film stress such that the mask pattern position precision obtained when the thin film is patterned will be the desired position precision--

--29. A photomask on which a mask pattern has been formed by the patterning of the thin film and the nitride film formed on the transparent substrate of the photomask according to Claim 9.--

--30. The photomask according to Claim 13, wherein the photomask has a phase shift pattern and the thin film is formed on or under the phase shift pattern.--

REMARKS

Claims 1-30 are pending herein.

By this Amendment, the phrase "(light-shielding function, opaque function, non-transmitting function)" has been deleted from claims 1, 2, 4 and 14-16. Claims 1, 2 and 14-16 have also been amended to recite that the thin film contains a metal material. Support for this amendment is found in the specification at, for example, page 10, lines 4-8. Claim 6 has been amended to recite "atomic%" instead of "at%." Support for this revision to claim 6 is